

## The Paradox of Meritocracy in Organizations

**Emilio J. Castilla**

*Massachusetts Institute of Technology*

**Stephen Benard**

*Indiana University*

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In this article, we develop and empirically test the theoretical argument that when an organizational culture promotes meritocracy (compared with when it does not), managers in that organization may ironically show greater bias in favor of men over equally performing women in translating employee performance evaluations into rewards and other key career outcomes; we call this the “paradox of meritocracy.” To assess this effect, we conducted three experiments with a total of 445 participants with managerial experience who were asked to make bonus, promotion, and termination recommendations for several employee profiles. We manipulated both the gender of the employees being evaluated and whether the company’s core values emphasized meritocracy in evaluations and compensation. The main finding is consistent across the three studies: when an organization is explicitly presented as meritocratic, individuals in managerial positions favor a male employee over an equally qualified female employee by awarding him a larger monetary reward. This finding demonstrates that the pursuit of meritocracy at the workplace may be more difficult than it first appears and that there may be unrecognized risks behind certain organizational efforts used to reward merit. We discuss possible underlying mechanisms leading to the paradox of meritocracy effect as well as the scope conditions under which we expect the effect to occur. ●

The idea of meritocracy as a social system in which “merit or talent is the basis for sorting people into positions and distributing rewards” (Scully, 1997: 413) has received great attention since the term was popularized in 1958 by Young (1994). Advocates of meritocracy stress that in true meritocratic systems everyone has an equal chance to advance and obtain rewards based on their individual merits and efforts, regardless of their gender, race, class, or other non-merit factors. In the United States, for example, survey research repeatedly reveals that Americans endorse the meritocratic ethos. Most believe that meritocracy is not only the way the system *should* work but also the way the system *does* work (Kluegel and Smith, 1986; Ladd, 1994; Ladd and Bowman, 1998). Because meritocracy has been culturally accepted as a fair and legitimate distributive principle in many advanced capitalist countries and organizations (Scully, 1997, 2000; McNamee and Miller, 2004), scholars have sought to assess the extent to which equal opportunity and meritocratic outcomes have been successfully achieved in society (e.g., Arrow, Bowles, and Durlauf, 2000; Dench, 2006).

Inside organizations, a significant strand of this research concerns how organizational practices and procedures affect employees’ opportunities and careers, especially those practices designed to reduce disparities for women and ethnic minorities (e.g., Edelman, 1990; Baron, Mittman, and Newman, 1991; Dobbin et al., 1993; Edelman and Petterson, 1999). Recent empirical studies have found, however, that workplace inequality persists even with the adoption of merit-based pay programs (Castilla, 2008), affirmative action and diversity policies (Kalev, Dobbin, and Kelly, 2006), or certain popular team and cross-training arrangements (Kalev, 2009). These findings are not surprising to neo-institutional

theorists, who have long argued that organizational practices are adopted in part for symbolic reasons and consequently do not always accomplish their stated purposes (Edelman, 1992; Sutton et al., 1994; Kelly and Dobbin, 1998; Edelman, Uggen, and Erlanger, 1999; Stinchcombe, 2001).

What remains an open question, however, is whether gender and racial inequality persists in spite of management's efforts to promote meritocracy or even because of such meritocratic efforts. This is an important question given the fundamental shift to meritocratic employment strategies, such as pay-for-performance or merit-based reward practices, over the past two decades (Heneman and Werner, 2005; Miller, 2006; Noe et al., 2008). Although these merit-based efforts are intended to link employees' rewards directly to their performance, rather than to factors such as seniority or demographic characteristics, there is a growing concern that these efforts may not actually result in meritocratic outcomes (e.g., Roth, 2006; Castilla, 2008). A number of scholars have argued that organizational pay practices can increase gender and racial disparities because they introduce bias into employee compensation decisions (Reskin, 2000; Elvira and Graham, 2002). It may also be the case that not only merit-based practices but also meritocracy as a cultural value can serve as an "environmental trigger" (DiMaggio, 1997: 279) or be part of a "tool kit" of habits (Swidler, 1986: 273) that unleashes individual cognitive biases. Because employment decisions are made by managers embedded in organizational cultures, unintended adverse effects may result from employers' efforts to reward merit or other practices meant to increase fairness in the workplace.

Consistent with these research insights, recent scholarship has demonstrated that merit-based pay practices in particular may fail to achieve race or gender neutral outcomes, with results showing that women and minorities (in the same job and work unit, with the same supervisor, and the same human capital) received lower salary increases than white men, even after they are given the same performance evaluation score (Castilla, 2008). Because previous empirical studies have evaluated workplace inequality *after* the introduction of these practices (e.g., Castilla, 2008; Manning and Swaffield, 2008), however, research has not been able to successfully answer the question of whether the introduction of organizational cultures and practices aimed at promoting meritocracy can cause bias in organizations.

The goal of this article is to investigate the causal link between merit-based organizational efforts and their employment outcomes at the level of individuals involved in making these decisions. We develop and test our key hypothesis that managers making decisions on behalf of organizations that emphasize meritocracy will ironically show greater bias in favor of men over equally performing women in the translation of performance into bonuses than managers in organizations that do not emphasize meritocracy. Drawing on the culture and cognition tradition, we suggest that organizations promoting meritocracy as a cultural value can lead to unintended behaviors, in part by triggering managers' stereotypes and other schematas (Swidler, 1986; DiMaggio, 1997) when

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making their employment decisions. This is what we call the "paradox of meritocracy," in which emphasizing meritocracy as an organizational value to reward employees fairly may result in the opposite outcome. We test our paradox of meritocracy hypothesis directly with three different experiments (with a total of 445 participants across all three studies) in which individuals with managerial experience are asked to play the role of managers in a hypothetical organization and to evaluate and compensate employees based on their performance reviews. In our study, we experimentally manipulate both the gender of the employees being evaluated and whether the company's core values emphasize meritocracy in the organization.

## THE PARADOX OF MERITOCRACY

The concept of meritocracy as a distributive mechanism resting on equal opportunity and merit has broad cultural appeal (Scully, 1997, 2000; McNamee and Miller, 2004). As a result, many scholars have been interested in understanding to what extent equal opportunity and meritocratic outcomes have been achieved.

Inside organizations, employment strategies aimed at linking merit to employees' careers, such as pay-for-skill and pay-for-performance reward systems, are often portrayed as variations on meritocracy (Scully, 1997: 413). Merit pay is seen as an important symbol of an organization's culture, emphasizing that work is to be rewarded on the basis of performance alone, rather than other considerations, such as equality, need, or seniority (Heneman and Werner, 2005: 9). But results of empirical studies that control for employee performance have recently called into question whether the introduction of meritocratic (or merit-based) reward practices and routines in organizations helps to remedy gender and racial disparities in wages in the workplace (e.g., Elvira and Graham, 2002; Castilla, 2008).

The persistence of gender and racial inequality in wages is especially puzzling given the claims that some type of merit-based or incentive pay practices are widespread among employers (Heneman and Werner, 2005; Miller, 2006; Noe et al., 2008). According to a comprehensive survey of personnel procedures used in 826 firms in the United States, there has been a sharp rise in the percentage of companies using performance evaluations at the workplace, from approximately 45 percent in 1971 to more than 95 percent in 2002 (Dobbin, Schrage, and Kalev, 2008). According to the Hewitt Associates salary survey in 2002, 90 percent of the large organizations surveyed already had a merit pay plan in place (Hewitt Associates, 2002, cited in Heneman and Werner, 2005).

These organizational strategies aimed at promoting merit-based reward systems in companies have also received great support in both scholarly and practice-oriented communities. Some practitioners encourage employers to use performance-reward systems (Scharinger, 2002) and highlight the idea that strengthening the tie between rewards and performance evaluations increases job satisfaction and motivates employees to work hard (Lazear, 1998; Martocchio, 2004;

Milkovich and Newman, 2004). These programs can also attract more able workers by paying them a wage that better reflects their performance (Lazear, 2000). Many workers find that these practices give them greater opportunities for advancement (Osterman, 1999) or at least create an "illusion of opportunity" that can also be motivational at the workplace (Ospina, 1996).

Less well understood is whether these merit-based reward practices successfully link employees' compensation directly to their performance evaluations and productivity, thereby reducing the influence of stereotypes and other work-irrelevant factors. In particular, we know little about the impact of promoting meritocratic cultures and practices on inequality in employee wages and attainment. The suspicion that adopting these merit-based pay practices in organizations, especially those that promote meritocracy, may not solve inequality in the workplace is not new (e.g., Kalev, Dobbin, and Kelly, 2006; Castilla, 2008; Kalev, 2009). Broadly, the claim that organizational bureaucracies and routines may even serve to exacerbate or institutionalize gender and racial inequality in the workplace has long been established (e.g., Kanter, 1977; Edwards, 1979; Acker, 1989, 1990). Scholars interested in studying the transformation of the employment relationship and new "market-driven" employment arrangements have also raised equity and fairness concerns about these practices (e.g., Jacoby, 1985; Kochan, Katz, and McKersie, 1986; Cappelli et al., 1997; Cappelli, 1999; Osterman et al., 2001; Dencker, 2009). However, past work has not tested the *causal* effect promoting meritocracy might have on biases in reward decisions.

Under certain circumstances, organizations that emphasize meritocratic values and beliefs may unintentionally introduce bias and create inequity in the distribution of employee rewards. In a recent examination of pay practices, Castilla (2008) showed that the implementation of an ostensibly meritocratic performance-reward system, designed to give workers extra compensation based on their performance, did not eliminate gender and racial bias in earnings. The large service organization studied had recently introduced a two-stage performance-reward process. In the first stage, supervisors meet employees annually and evaluate their performance. In the second stage, based on those performance evaluations, the employee may be recommended for a bonus by a manager superior to the rater. Castilla (2008: 1479) found what he called "performance-reward" bias: even though performance evaluations were the most important predictors of employees' salary increases and bonuses every year (in stage 2), significant effects for demographics were found on salary growth. Overall, salary increases were significantly lower for women, ethnic minorities, and non-U.S.-born employees when compared with white men with the same performance evaluation scores, in the same job and work unit, with the same supervisor, and the same human capital. Notably, this penalty occurred even after the organization signaled that it strongly valued and supported meritocracy at the workplace by implementing a performance-reward program that linked employees' performance with the size of pay increases. Similarly,

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using data from a financial corporation, Elvira and Graham (2002) reported a 25 percent difference in performance-based bonuses, also distributed at managers' discretion, between women and men in the same jobs.

Because these field studies focused exclusively on organizations *after* the introduction of the merit-based bonus system, however, these findings cannot determine whether ascriptive inequality in the distribution of bonuses persisted in spite of management's efforts to introduce a merit-based reward system or because of these efforts. It could also be that the race or gender effects found in real settings reflect some unobserved heterogeneity, either for the employees or for the features of the organization. Our goal in this article was to experimentally test whether emphasizing meritocratic values at the organizational level may actually introduce bias in favor of men over equally performing women in translating performance into bonus amounts. In our study, we focused specifically on how organizations may attempt to promote particular meritocratic values among their managers and employees, which is consistent with one dimension of the broad definition of culture in DiMaggio (1997).

Although our prediction of greater bias in monetary rewards under meritocratic cultures may seem counterintuitive, it is consistent with broader scholarship in this area. For example, the important "myth and ceremony" argument made by Meyer and Rowan (1977) highlighted that organizational procedures and structures are often designed to be "rituals." They are adopted symbolically to gain legitimacy but can be inefficient or ineffective, not necessarily accomplishing their stated purpose (e.g., Edelman, 1992; Sutton et al., 1994; Kelly and Dobbin, 1998, 1999; Stinchcombe, 2001). Consistent with these neo-institutional predictions, studies have shown that organizational practices aimed at reducing ascriptive inequality do not always work (e.g., Edelman, 1990; Baron, Mittman, and Newman, 1991; Dobbin et al., 1993; Edelman and Petterson, 1999). Recent empirical work has shown that workplace inequality remains even after the adoption of affirmative action and diversity policies (Kalev, Dobbin, and Kelly, 2006). Although institutional accounts suggest that practices may fail to accomplish their stated purpose, they generally do not go so far as to predict that these practices may accomplish the opposite.

The prediction that emphasizing meritocracy may actually have a paradoxical effect is in accordance with research on the link between culture and cognition. The insight is that cultures play a key role in shaping cognitive processes (e.g., Swidler, 1986; DiMaggio, 1997), with studies showing that specific elements of local cultures can trigger individual cognitive and interactional biases against low-status groups (Ridgeway, 1997; Correll and Ridgeway, 2003; Turco, 2010). Relevant to this prediction, recent studies on cognitive bias and stereotyping have found that in contexts in which people are led to feel that they are unbiased, fair, or objective, they are more likely to then behave in biased ways (Monin and Miller, 2001; Crandall and Eshleman, 2003; Uhlmann and Cohen, 2005, 2007; Effron, Cameron, and Monin, 2009; Kaiser et al., 2009). For example, people given a chance to

disagree with a set of sexist statements (Monin and Miller, 2001) or primed to feel objective (Uhlmann and Cohen, 2007) have been found to be more likely to recommend a male over a female candidate in experimental hiring scenarios.

Drawing on the culture and cognition tradition, we suggest that employers' efforts to promote meritocratic beliefs or cultures in organizations may ironically yield unintended negative consequences, perhaps by leading individuals to feel unbiased, fair, or objective, and as a result become more likely to express individual bias toward low-status groups of employees. In the case of gender, we thus predict that managers making decisions on behalf of an organization that emphasizes meritocracy will show greater bias in favor of male employees than managers making decisions on behalf of an organization that does not emphasize meritocracy. In particular, we identify and test this "paradox of meritocracy" effect, whereby emphasizing meritocracy has the causal effect of increasing ascriptive bias in the distribution of monetary rewards. Our main hypothesis is as follows:

**Hypothesis:** Participants in an organization that emphasizes meritocracy as a core organizational value will show greater levels of ascriptive bias in translating employee performance evaluations into monetary bonuses than participants in an organization that does not emphasize meritocracy.

We conducted three experimental studies designed to test our hypothesis, the first focusing specifically on whether there is a paradox of meritocracy. The next two studies further assess the paradox of meritocracy finding. Because an empirical examination of the potential underlying mechanisms leading to the paradox of meritocracy effect is beyond the scope of our study, we consider them theoretically in the discussion section.

## STUDY 1: THE PARADOX OF MERITOCRACY

We first tested our hypothesis with an experimental study in which participants, who played the role of employee managers in a fictitious large service organization in the United States, read a set of employee performance reviews and evaluated the employees on a number of career dimensions. The study employed a  $2 \times 2$  mixed factorial design that manipulated (1) the apparent extent to which a performance evaluation system was meritocratic (meritocratic or non-meritocratic, between subjects) and (2) the gender of the person being evaluated (male or female, within subjects). Participants were asked to make compensation decisions based on yearly employee performance reviews. Participants were randomly assigned to receive one of two different sets of organizational core values, one set that emphasized meritocracy (the "meritocratic" condition) versus another (neutral) set that did not emphasize meritocracy (the "non-meritocratic" condition).

Participants then examined three employee profiles. Two of the profiles were "test profiles" and included one male employee and one female employee with similar performance evaluations. These test profiles formed the basis of our analysis. We also included one "filler" profile, a male



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employee with a lower performance evaluation score. The filler profile was included to reduce suspicion that the study was about gender bias. Participants decided the size of the bonus, if any, each employee should receive. Participants also evaluated the profiles on other measures, including recommendations about promotion and retention. This design allowed us to test whether believing that the organization is meritocratic increases the level of gender bias in the managerial decision-making process.

## Method

**Participants.** The data for this study were collected in three sessions at a business school in a private university in the northeastern United States. Session 1 was conducted as an optional in-class exercise for masters of business administration (MBA) students and included 95 participants (67 male and 26 female; two did not answer the question on gender). Sessions 2 and 3 were conducted as an optional pre-presentation exercise for a group of students and managers attending either an MBA program or a similar business degree program. Attendees were interested in learning about performance-reward systems in the workplace. Sessions 2 and 3 were conducted at the same university but, by design, did not include any of the participants in session 1. Session 2 included 68 participants (48 male and 20 female). Session 3 included 66 participants (48 male and 18 female). The final sample in our first study thus included 229 individuals (163 male and 64 female).

Unlike many social science experiments, which rely on undergraduate participants, this study employed MBA students with substantial work and managerial experience. Although these participants are in limited supply, thus not permitting the extensive experimental permutations possible in some research using undergraduate samples, this approach potentially offers more realism in its assessment of the ways managers with different professional backgrounds evaluate and compensate their workers. Additionally, one of the many goals of these MBA programs is to prepare MBA students to fill positions with supervisory and managerial responsibilities and to play an active role in employee performance evaluations.

The average age of participants was 29.71 (with a standard deviation of 3.89 years); they had an average of 5.80 years of work experience (with a standard deviation of 3.36 years). Approximately 4 percent of the respondents had already earned an MBA degree; the remainder were currently enrolled in an MBA program. Additionally, 80.4 percent of participants had previously worked as a manager, and the average participant had 2.4 years of management experience (with a standard deviation of 2.6 years). About 78.3 percent of respondents reported liking jobs with supervisory responsibilities (with 5.3 percent not liking them, and 16 percent not knowing yet whether they would like jobs with supervisory duties).

**Procedure.** The procedure across sessions was identical. Participants were invited to participate in a "Management Personnel Decision-Making Exercise" as part of an educational unit on a similar topic. Participants who volunteered to

participate received a packet that included the study materials. The experimenter gave a verbal overview of the study and then participants read and completed the packet. The instructions asked participants to play the role of a manager at "ServiceOne," a large service-sector employer, and to make personnel decisions similar to those made at actual firms. Following the instructions, participants read a company description for ServiceOne. They were informed, accurately, that the description was based on a real firm that one of the authors had worked with (with many details changed in order to protect the firm's identity). In this section, participants also read a description of how performance evaluations and compensation decisions are made at ServiceOne, described in more detail below.

Following the company description was the experimental manipulation of meritocracy. We manipulated the apparent level of meritocracy by providing participants with a list of "Core Company Values" that either did or did not emphasize meritocracy in the performance-reward system (see below). Participants then examined three employee profiles, including two equivalent "test profiles" that varied in gender, as well as the filler profile, which was always male. After participants examined the three profiles, they first evaluated each employee on a range of measures, including our key dependent variable (the bonus amount decision), and then they filled out a set of "final reflections" that included our manipulation checks. Participants were informed from the outset that the profiles were fictional. After the experiment was conducted, the exercise was integrated into a class discussion and was immediately followed by a cautionary lesson for participants to learn about the unintended consequences of using performance-reward systems.

**Company description.** The company description for ServiceOne included both general details about the firm and specific details about the performance evaluation process. ServiceOne was described as a large private service-sector organization in an urban area in North America, focusing on research and information technology. The description included information about the types of jobs available at ServiceOne and age and tenure demographics for employees. Participants were asked to play the role of a manager in charge of a small work group of consultants.

The company description also included information about the evaluation procedure that participants would use when considering the employee profiles. We focused on two-stage evaluation processes such as those described by Castilla (2008) in which (1) one manager or immediate superior evaluates an employee's performance, and then (2) a second, different manager uses this evaluation to determine whether the employee receives a raise and, if so, how much. Participants played the role of the second manager. This meant that participants received the performance evaluations of three employees in their work unit and used them to make managerial decisions about the bonuses, promotion, and termination for these employees at the end of the fiscal year.

We used this company setting for several reasons. First, laboratory research has generally focused either on



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performance evaluations alone or on simultaneous performance-reward evaluations. Examining the two-stage evaluations allowed us to study a frequently used organizational procedure about which relatively little is known in the inequality literature. More importantly, the two-stage procedure replicated in our study is widely advocated by employers and human resource specialists for making pay decisions (e.g., Campbell, Campbell, and Chia, 1998; Mathis and Jackson, 2003; Burke, 2005; for a review, see Bretz, Milkovich, and Read, 1992; Heneman and Werner, 2005).

Second, practitioners increasingly view the two-stage evaluation system as more desirable than single-stage evaluation systems. Many have defended separating performance appraisals and salary discussions into two separate stages mainly because decoupling these two processes and strengthening the tie between the performance evaluations of employees and their career outcomes are generally seen as more meritocratic. Work has suggested that this decoupling encourages employees' perception of merit, increases job satisfaction, and is motivational (Gerhart and Rynes, 2003; Martocchio, 2004; Milkovich and Newman, 2004). Finally, findings of bias in the experimental study would dovetail with recent case studies showing that real-world organizations that use these two-stage performance-reward procedures exhibit pay gaps based on workers' race, gender, and national origin (e.g., Castilla, 2008, in the United States; Manning and Swaffield, 2008, in the United Kingdom).

**Meritocracy manipulation.** To manipulate whether the organization was presented as meritocratic, we varied the information that participants received about ServiceOne's company values. For each condition, participants read a form describing five "Core Company Values at ServiceOne." To be as realistic as possible, we drew on information from a real organization's core values introduced to emphasize meritocracy at the workplace as one of the most basic aspects of an organizational move toward achieving meritocracy and also as a cultural symbol signaling that work was to be rewarded on the sole basis of performance. This approach also allowed us to test directly the potential causal effect of promoting a merit-based culture on employee bonuses. In the *meritocratic* condition, the core values emphasized fairness and compensation based on performance. These meritocratic core values statements were as follows: (1) "All employees are to be rewarded fairly"; (2) "whether employees deserve a raise is determined by their performance"; (3) "raises and bonuses are based entirely on the performance of the employee"; (4) "promotions are given to employees when their performance shows that they deserve it"; and (5) "ServiceOne's goal is to reward all employees equitably every year."

In the *non-meritocratic* condition, the core values did not indicate meritocratic values; instead, they emphasized the regularity of evaluation and managerial autonomy. We refer to this condition as the *non-meritocratic* condition simply because this condition does not emphasize fairness or compensation based on employee performance as the meritocratic condition did. To be conservative, the non-meritocratic

condition was designed to be neutral but not explicitly anti-meritocratic; thus the possibility of bias or discrimination in evaluations was not raised. The non-meritocratic core values statements were the following: (1) "All employees are to be evaluated regularly"; (2) "whether an employee deserves a raise is determined by their manager"; (3) "raises and bonuses are to be given based on the discretion of the manager"; (4) "promotions are to be given to employees when their manager decides that they deserve it"; and (5) "ServiceOne's goal is to evaluate all employees every year."

To make sure participants read and considered each of the core values statements carefully, we asked them to indicate whether they agreed with each value by placing a check mark on a line next to each statement. Participants were asked to indicate whether they agreed with the values statements so that they would feel as if their goals were the same as those of the company and thus would behave like an actual manager at that firm. Requesting that participants indicate agreement makes the manipulation similar to the "moral credentials" manipulation introduced by Monin and Miller (2001). One distinction between the latter study and ours is that our participants agreed with statements about the general values of the company rather than about their specific beliefs about gender or other bases of moral credentials. Following the meritocracy manipulation, participants examined the three employee profiles.

**Employee profiles.** Participants examined three profiles, including two equivalent test profiles that varied in gender and one filler profile that was always a low-performing male employee. Each profile was presented using a "Performance and Staff Development Evaluation Form," which included a quantitative assessment of each employee on a 1–5 scale as well as qualitative comments from the employee's immediate supervisor. All employees had the same title, "Consultant," worked in the same unit, "Product Development," and had the same supervisor.

We manipulated the employee's gender by using male- and female-typical names on the profiles. We chose gender-typical names from a list tabulating the most common names for men and women in the United States and then paired them with common last names (from the genealogy of names in the census.gov Web site). The names of our test profiles were Patricia Anderson and Michael Taylor, and the name of our filler profile was Robert Miller. To test our hypothesis, it was key that the test profiles were of equivalent merit, but not so similar as to raise participants' suspicion that studying gender bias was a goal of the research. To accomplish this, we gave each test profile equal quantitative performance scores, similar but not identical qualitative comments, and counterbalanced the qualitative comments across profiles. The 5-point quantitative assessment scale was labeled "Summary of Performance," and each of the 5 levels was labeled with a descriptive phrase. The two test profiles received a score of 4 on the 5-point scale. This score included the descriptive label "Staff member's performance consistently meets and frequently exceeds all established goals/expectations for the position."

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The profiles also included two types of qualitative feedback: areas in which the employee performed well (praise) and areas in which the employee's work needed improvement (criticism). The test profiles each included three sentences of praise and two sentences of criticism. For one test profile, the praise read, "Michael/Patricia is hardworking and quick to find ways to solve clients' problems. He/She is also generally popular with the clients. Michael/Patricia reliably completes projects on time." For the other test profile, the praise read, "Michael's/Patricia's proposals are always well thought-out and highly detailed. He/She always does an excellent job of communicating technical aspects of the proposals to clients. Clients respect and enjoy working with Michael/Patricia." The criticism for one of the test profiles read, "While the quality of Michael's/Patricia's work is excellent, several projects this year have gone over budget. In the next appraisal cycle, he/she needs to work on keeping costs down." The criticism for the other test profile read, "Michael/Patricia is a valuable team member, but sometimes tries to take on too many projects at once. In the next year, he/she needs to work on staying focused." The qualitative comments were counter-balanced across the two test profiles: each set of comments was randomly assigned to the male test profile for half of the sample and to the female test profile for the other half. This ensured that any differences in the evaluations of the qualitative comments did not bias the results because the employee's gender was uncorrelated with which comments he or she received.

We included a third filler profile, named "Robert Miller," to further reduce suspicion that gender bias was a focus of the study. With three profiles, gender may less obviously differentiate the profiles than if participants rated two very similar profiles that only differed by gender. The third profile was designed to be clearly less qualified than the two test profiles so as not to compete with the test profiles on the ranking variables. The test profile was always rated a 3 out of 5 on the quantitative evaluation. The "3" rating was labeled "Staff member's performance consistently meets established goals/expectations for the position." The praise for the filler profile was similarly lukewarm, reading, "Robert does a good job of listening to the clients and meeting their expectations. His work has been consistently solid, but not spectacular." The criticism for the filler profile always read, "Robert has a tendency to miss minor deadlines when things get busy. He needs to do a better job of staying on top of his projects."

**Dependent measures.** Our hypothesis predicted that people will be more likely to engage in gender bias in the translation of performance evaluations into rewards when the organization presents itself as meritocratic. To test this argument, we asked participants to assign a yearly bonus to each employee. They were told that they had a limited pool of resources (\$1,000) from which to assign the bonus, to be divided among the three employees. To determine whether other employee outcomes are also affected by perceptions of meritocracy, we asked participants to rate each employee on four additional items, using a set of 7-point Likert-type scales. The first of these questions read, "Do you think hiring this employee was the right decision?" and was anchored at "definitely wrong

decision" and "definitely right decision." Similar questions asked to what extent the employee should be considered for promotion or termination and whether the employee would be successful in the future. We also collected variants of these questions, which asked participants to choose only one employee profile as most deserving of a bonus, promotion, or retention, and as having the greatest potential for success.

After completing and submitting the rating part of the experiment, participants were asked to fill out a "final reflections" questionnaire. They were asked to indicate their beliefs about the performance evaluation process and about ServiceOne as a company. This included our key manipulation check questions, the extent to which ServiceOne as a company was *meritocratic* and *fair* (again using 7-point scales). We expected participants to rate the company as more meritocratic and fair in the meritocratic condition than in the non-meritocratic condition. To determine whether this belief was limited to the company, we also asked participants to evaluate (1) the extent to which the particular supervisor's evaluations were accurate, competent, and fair, and reflected knowledge of the employees and effort, (2) whether the performance evaluation process itself was viewed as accurate and fair, and (3) whether, as an employee, they would like to be evaluated using a similar process.

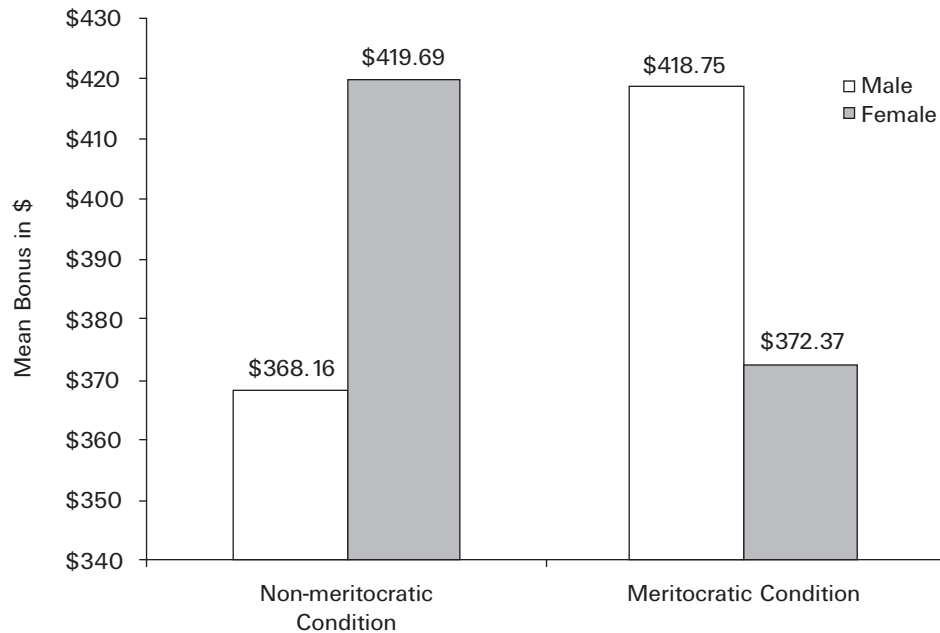
## Results

**Manipulation check.** We first checked whether our manipulation successfully convinced participants that ServiceOne was more meritocratic and fair in the meritocratic condition compared with the non-meritocratic condition and found that participants did rate ServiceOne as more meritocratic under the meritocratic condition than under the non-meritocratic one (meritocratic condition mean = 4.05 vs. non-meritocratic condition mean = 3.57,  $t$ -value = 2.609, significant at the .01 level). Participants also rated the company as more fair in the meritocratic condition (meritocratic condition mean = 3.67 vs. the non-meritocratic condition mean = 3.25,  $t$ -value = 2.565, significant at the .01 level). This indicates that our manipulation of meritocracy was successful. Further checks determined that impressions of the company did not generalize to the performance appraisal process or to the supervisor. Thus we did not find any significant differences in the supervisor's accuracy, competency, knowledge of employee, or fairness across conditions, nor did we find any differences in ratings of the accuracy and fairness of the company's evaluation process or willingness to be evaluated using this process. This indicates that the manipulation successfully shaped beliefs about the organization, not beliefs about the supervisor or the evaluation process itself.

**The paradox of meritocracy effect.** We assessed our main hypothesis by examining the bonus-amount decision for each of the test profiles by apparent meritocracy condition. We expected to find greater levels of gender bias in the meritocratic condition than in the non-meritocratic condition in the form of a lower bonus for women. To test this claim, we began by comparing the bonus amounts for the equally performing male and female test profiles within each

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Figure 1. The paradox of meritocracy in the distribution of rewards by employee gender, study 1 (N = 229).



2 × 2 factorial design: ANOVA F-test (Gender × Meritocracy interaction) = 18.79 ( $p = .000$ ).

condition. We also calculated a paired t-test to determine whether the difference varied within each condition. Given the known problems of using difference scores as dependent variables (Edwards, 2001), we interpreted the ANOVA results using bonus amount as the dependent variable: we hypothesized that the meritocracy manipulation would interact with the gender of the employees who were being evaluated to influence the bonus. Such interaction is properly tested by an ANOVA using bonus amount as the dependent variable.

The results of our analyses are presented in figure 1. In the non-meritocratic condition, we found that women, on average, earned a bonus \$51 higher than equally performing men, significant at the .01 level. By contrast, we found the opposite pattern in the meritocratic condition: men earned, on average, a bonus \$46 higher than equally performing women, significant at the .01 level.<sup>1</sup> Because the t-tests evaluate differences within each condition only, to test for differences across condition, we also performed a 2 × 2 factorial ANOVA (repeated measures for the male and female test profiles) to test our main hypothesis regarding the bonus. Consistent with our hypothesis, this analysis yielded an interaction effect for gender and meritocracy such that women were paid less than men in the meritocratic condition, but not in the non-meritocratic condition ( $F = 18.792$ ,  $p = .000$ ). Consequently, participants in a performance-reward system that emphasizes meritocracy significantly favored men over women in the translation of employee performance into bonus amounts. There was neither a significant gender main effect ( $F = .052$ ,  $p = .82$ ) nor a meritocracy main effect ( $F = .027$ ,  $p = .87$ ) on the bonus. We therefore find strong support for our main hypothesis.

<sup>1</sup> We found no significant difference in the bonus amount assigned to the filler profile between the two meritocracy conditions. The average bonus for the filler profile was \$159.23 in the meritocratic condition and \$150.07 in the non-meritocratic condition. The t-test for the bonus difference of \$9.16 was not significant ( $t\text{-value} = -.739$ ,  $p = .46$ ), suggesting that the meritocracy condition did not significantly affect the bonus rating of the filler profile across conditions.

We did not predict a tendency for participants to give women a higher bonus than men in the non-meritocratic condition. Though this result does not contradict our main prediction, we considered reasons for this pattern in detail below, in our third study.

**Robustness checks.** We conducted several additional analyses to ensure that the results were robust as well as to further investigate our findings. First, we estimated the analyses separately for each of the three experimental sessions. We found results substantially similar to those reported. Additionally, we analyzed the data separately by the gender of the participants. Regardless of participants' gender, we found strong support for our main hypothesis. The interaction effect for gender and meritocracy on the bonus was significant for male participants ( $N = 163$ ;  $F = 11.121$ ,  $p = .001$ ) and female participants ( $N = 64$ ;  $F = 7.273$ ,  $p = .01$ ).<sup>2</sup>

To further evaluate the robustness of our findings, we estimated a series of multivariate regression models that included participants' characteristics as control variables. For each participant, regardless of meritocratic condition, we computed the difference in the amount of the bonus between the male and the female test profiles and then used that difference as the dependent variable for the regression analyses. This difference provides an absolute measure of "rating" bias in favor of men. In addition to examining the main effect of meritocracy, we included a number of control variables, including participants' gender, age, and years of management experience, as well as their ratings of the sources of employees' success. Consistent with our main hypothesis, the meritocracy manipulation was always statistically significant and in the predicted direction for the bonus amount.<sup>3</sup>

Although the results of study 1 support our hypothesis, one alternative explanation for our findings is that participants might have made certain gender attributions and interpreted the language in the organizational values statement differently in the meritocracy condition. In particular, participants may have interpreted the emphasis on "equity" and "fairness" in the meritocratic condition as a rhetorical device actually signaling a preference for women. Along these lines, experimental research has found that, under certain conditions, preferential selection methods can produce a backlash toward the beneficiaries (Heilman, Block, and Lucas, 1992; Heilman, McCullough, and Gilbert, 1996). If so, participants in the meritocratic condition might have assumed that the female test profile was held to more lenient standards and was more likely to have achieved her performance rating through help from others or some source other than her own productivity, ability, or effort. For example, research suggests that men's performance tends to be attributed to skill, while women's tends to be attributed to luck (Deaux and Emswiler, 1974).

To address this alternative explanation, we collected additional measures right after the administration of the employee reward questionnaires. Following Pazy (1986), we asked participants to evaluate, using 7-point Likert type scales, why each employee was successful, along five dimensions: (1) ability and talent, (2) effort and hard work, (3) luck or

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We ran ANOVA (repeated measures for the male and female test profiles) to test for the three-way interaction of gender of the employee  $\times$  gender of the participant  $\times$  meritocracy condition. This interaction was not significant, providing further support for the finding that the interaction effect for gender and meritocracy on the bonus does not depend on the gender of the participant ( $p = .98$ ). We also ran our ANOVA analysis controlling for the bonus amount that participants gave to the filler profile. Though the effect of this variable was negative and significant at the .05 level—signaling that the higher the amount of money given to the control profile, the lower the amount of money participants gave to our two test profiles, which is not surprising, given the \$1,000 budget constraint—including such control variables in the models did not change our main results at all. This model's interaction effect for gender and meritocracy on the bonus was still significant ( $F = 17.725$ ,  $p = .001$ ).

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Because the regression results were largely redundant with the findings presented in prior ANOVA analyses, they are omitted but are available upon request.



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chance, (4) easiness of their job, and (5) help they have received. Participants were also asked to indicate which factor was most responsible for each employee's success. If the meritocratic condition did lead participants to believe women were evaluated according to more lenient standards, women in the meritocratic condition should be evaluated as more likely to have been successful due to factors other than ability and talent or effort and hard work. The results of our analyses of these employee attributions did not support this alternative explanation. We found no significant gender differences in the perceptions of sources of employees' success between respondents in the meritocratic and non-meritocratic conditions. Consistent with earlier work (Pazy, 1986), we only found significant that women's success was more likely than men's to be attributed to hard work and effort, but this pattern did not differ by meritocratic condition. These results suggest that participants did not perceive women to be evaluated more leniently in the meritocratic condition.

**Other employee outcomes.** Our hypothesis focused on the effect of meritocratic values or beliefs on bias in the distribution of bonuses. One important question is the extent to which this effect may be found for employees' other career outcomes. In general, past research suggests that gender bias may affect decisions on a wide range of outcomes, such as hiring, promotion, and salary (e.g., Steinpreis, Anders, and Ritzke, 1999; Foschi, 2000; Biernat and Fuegen, 2001; Eagly and Karau, 2002). This is because gender stereotypes draw on broad-based beliefs about women's and men's differential competence, assertiveness, and other traits generally thought to be needed for high status or traditionally male occupations (Eagly and Karau, 2002; Biernat, 2003; Correll and Ridgeway, 2003). As a result, these stereotypes should apply to other employment outcomes that are related to an individual's competence and productivity. Consequently, to the extent that emphasizing meritocracy at the organizational level increases the expression of gender stereotypes, we would also expect to find greater levels of bias in favor of male employees in a variety of career outcomes.

Recent fieldwork suggests that the effects of emphasizing meritocracy may be greatest for salary and bonus increases. Empirically, in studying a company that emphasized the meritocratic aspect of its performance-reward system, Castilla (2008) found significant penalties for women, minorities, and non-U.S. citizens in bonus amounts but not in promotions, terminations, or the binary decision of whether an employee deserves a bonus. Theoretically, Castilla argued that this difference arises at least in part because employee hiring, promotion, and termination are more visible employment outcomes (consistent with Petersen and Saporta, 2004). Employees may not know how much their salaries changed relative to other members of their unit, but information about who was hired, promoted, or terminated is more easily available and observable. Because bias in these career outcomes is more manifest and therefore easier to detect, Castilla predicted that it should be less likely to occur in the workplace. This is also consistent with Kalev, Dobbin, and Kelly's (2006) finding that managerial accountability is associated with higher female and minority representation in

managerial jobs. Since the development of employers' compliance with Title VII and the human resource profession in the late 1960s (see Reskin and McBrier, 2000; Stinchcombe, 2001; Kalev, Dobbin, and Kelly, 2006; Dobbin, 2009), we would expect managers to feel more accountable for their decisions on hiring, base salaries, promotions, and terminations than for decisions regarding bonuses (Castilla, 2008). This is also in accordance with considerable work in social psychology indicating that bias is more likely when decision makers feel that their judgment is unlikely to be closely scrutinized (Tetlock, 1983a, 1983b; Lerner and Tetlock, 1999).

The transparency argument made in these previous studies aligns closely with the moral credentials argument (Monin and Miller, 2001), according to which people do not wish to appear prejudiced to others, or even to themselves (i.e., privately acknowledge that bias might shape their evaluations of others). Thus they should be less likely to express bias when that bias could more obviously call their moral credentials into question. For example, recommending a somewhat smaller salary increase for a woman over a similarly qualified man may be more easily rationalized, and thus pose a smaller threat to one's view of oneself as unbiased, than choosing to hire, promote, or terminate a man over a similarly qualified woman. Though emphasizing meritocracy should increase bias, the manifestation of such bias should be stronger for outcomes in which disparities would be subtler or less noticeable to others.

There are also practical reasons to expect that emphasizing meritocracy in organizations when implementing pay-for-performance programs will have the greatest effect for salary and bonus increases. Such programs typically rely on performance evaluations for making pay decisions (Institute of Management and Administration, 2000; Burke, 2005), but they explicitly require additional supply- and demand-related factors, such as job openings and/or employees' tenure in the company, and skills, when making promotion or termination decisions at the firm level (Miller, 2006).

Based on these reasons presented in prior work, our ancillary prediction is therefore that participants in an organization that emphasizes meritocracy as a core organizational value will show lower levels of bias in the translation of employee performance evaluations into other more observable career decisions than monetary bonuses. To test this prediction, we collected and examined four other employee ratings of the test profiles by meritocracy condition. Because these other career outcome variables are measured using a different metric than the bonus, we computed a standardized measure of the paradox of meritocracy effect for each rating variable (i.e., beta coefficients).

This approach allowed us to directly compare the effect of our meritocracy manipulation on employee bonus versus the other career variables. For each participant, regardless of meritocratic condition, we computed the difference in ratings between the equally performing male and female test profiles and then used the standardized values of these differences as the main dependent variables. These differences provide a standardized measure of the level of bias in favor of men in the translation of performance evaluations into each

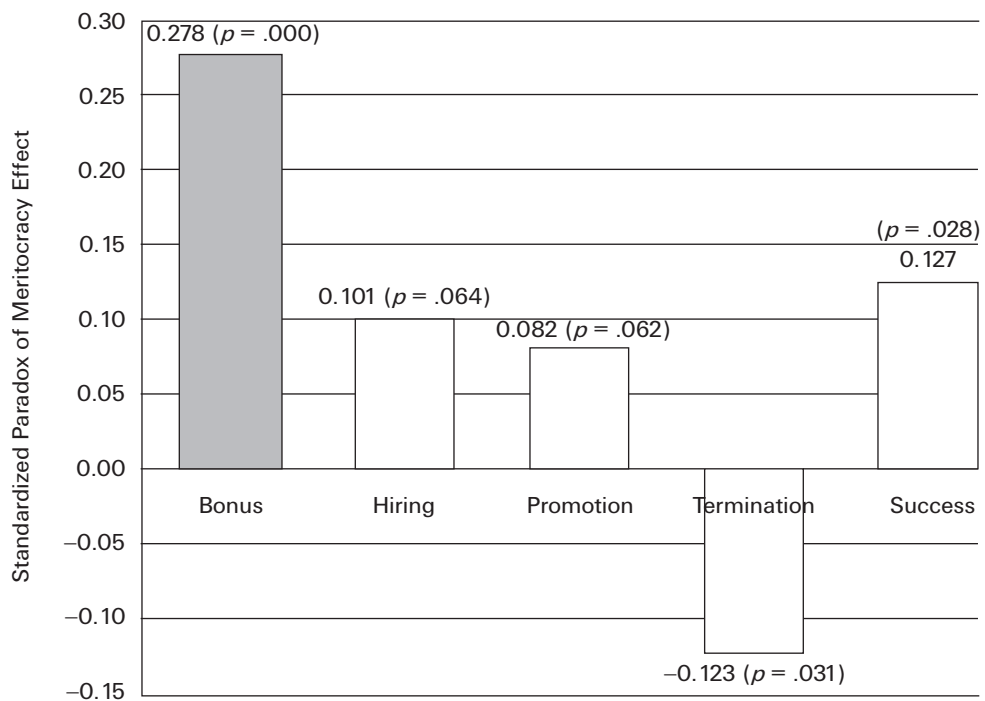
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employee rating score. Similar results were obtained when estimating Cohen's D (Cohen, 1988). Regardless of the method used to compare the paradox of meritocracy effect across the different variables of different scales and magnitudes collected (including ANOVA coefficients and marginal effects), we consistently found that the levels of bias (in favor of men) were larger for the bonus amount than for the other four career outcome variables.

Results are presented in figure 2. Supporting our ancillary prediction, we found that the tendency for participants to express bias in favor of men in the meritocratic condition was large and highly significant for the bonus measure ( $B = .278$ ,  $p = .000$ ). But we found smaller levels (in absolute magnitude) of gender bias in the meritocratic condition for hiring ( $B = .101$ ,  $p = .064$ ), promotion ( $B = .082$ ,  $p = .062$ ), termination ( $B = -.123$ ,  $p = .031$ ), and success in the future ( $B = .127$ ,  $p = .028$ ; all one-sided tests).

Table 1 reports differences in ratings and the relevant paired t-tests comparing the unstandardized employee career ratings for the male and female test profiles in each experimental condition; for convenience, we also include the analysis of the bonus amount in the table. Once again, we also ran  $2 \times 2$  factorial ANOVAs (repeated measures for the male and female profiles) and report the interaction term

Figure 2. The paradox of meritocracy: Standardized coefficients by employment career outcome.



Note: For the purpose of comparing across career outcomes of different scales and magnitudes, the standardized measure of the paradox of meritocracy effect is reported for each rating variable (i.e., beta coefficients). Consistent with our prediction, the penalty for the bonus amount is larger than for hiring, promotion, termination, or success. P-values (in parentheses) reflect statistical differences from zero and are calculated for each career outcome variable.

Table 1

**Mean Employee Ratings in Meritocratic and Non-meritocratic Conditions by Employee Gender\***

	Non-meritocratic Condition (N = 116)			Meritocratic Condition (N = 113)			ANOVA F-test (Gender x Meritocracy Interaction Term) <sup>†</sup>
	Male test profile (Michael)	Female test profile (Patricia)	Difference (t-value)	Male test profile (Michael)	Female test profile (Patricia)	Difference (t-value)	
Bonus amount (Total of \$1,000 to distribute)	\$368.16 (116.03)	\$419.69 (122.30)	\$51.53*** (-2.948)	\$418.75 (111.38)	\$372.37 (102.75)	\$46.38*** (3.267)	18.79***
Hiring decision (1 = Definitely wrong decision; 7 = Definitely right decision)	5.84 (1.06)	6.03 (0.91)	-0.19* (-1.545)	6.04 (0.68)	5.99 (0.85)	0.05 (0.501)	2.34
Promotion decision (1 = Definitely do NOT promote; 7 = Definitely promote)	4.86 (1.31)	5.02 (1.41)	-0.16 (-0.923)	5.18 (1.07)	5.06 (1.23)	0.12 (0.826)	1.52
Termination decision (1 = Definitely do NOT terminate; 7 = Definitely terminate)	2.12 (1.21)	1.85 (1.01)	0.27** (2.028)	2.01 (1.19)	2.06 (1.26)	-0.05 (-0.495)	3.51*
Success in the future (1 = Will NOT be successful at all; 7 = Will be highly successful)	5.58 (0.97)	5.75 (0.98)	-0.17* (-1.406)	5.84 (0.76)	5.70 (0.92)	0.14* (1.319)	3.70*

\*  $p < .10$ ; \*\*  $p < .05$ ; \*\*\*  $p < .01$ ; one-sided t-tests.

\* Standard deviations are in parentheses. We calculated paired sample t-tests for the difference in the rating variables between the male and the female test profiles in each meritocracy condition separately, reported under the Difference (t-value) columns.

<sup>†</sup> F-values are reported in this column. Based on our ancillary prediction, we expected participants in the meritocratic condition to show lesser levels of bias in the translation of employee performance evaluations into other key employee career outcomes (when compared with the translation of performance evaluations into bonus amounts) than participants in the non-meritocratic condition.

between the meritocracy manipulation and the gender of the employees in column 7 of table 1. The only significant interaction effects for gender and meritocracy were found for the termination ( $F = 3.51$ ,  $p = .062$ ) and success ratings ( $F = 3.70$ ,  $p = .056$ ).

In addition, we examined whether participants were more likely to rank the male test profile first across all outcome variables, by meritocracy condition and gender. We also expected that the effect of the meritocracy manipulation on gender bias would be smaller than on the bonus for the more visible measures. Across all variables, men were always preferred more under the meritocratic condition than under the non-meritocratic condition. The preferences for men over equally performing women, while substantively large, were not significant.

## STUDY 2: GENDER COMPOSITION OF THE EMPLOYEE PROFILES

Study 2, designed to test whether the gender composition of the employee profiles matters, was nearly identical to study 1,

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with the exception that we used a female name (Linda instead of Robert) for the filler profile. We conducted this second experiment to rule out one important alternative explanation for our findings in study 1: the fact that our filler profile was male in study 1 may have shaped the comparisons made by the participants, leading to a preference for the male employee in the meritocratic condition.

Individuals often use gender to determine salient referents for comparison when making evaluations regarding pay and other career outcomes (Kulik and Ambrose, 1992), comparing males with other males and females with other females (for a review of work showing how one's numerical representation in a group affects individual judgment and influence, also see, e.g., Reagans, 2005; Loyd and Phillips, 2006; Duguid, Loyd, and Tolbert, 2010). In study 1, participants may have rewarded our male test profile more highly in the meritocracy condition because they implicitly compared him with Robert, our low-performing filler profile. When making such a comparison, it could have seemed more fair or meritocratic to give the male test profile a larger bonus. In contrast, our female test profile could not have benefited from comparison with a low-performing female test profile and instead may have been compared with the male test profile, which was virtually identical in terms of apparent quality. If this alternative argument is true, then changing the gender of the filler profile from male to female should reverse the results, producing a greater bonus for women in the meritocracy condition.

## Method

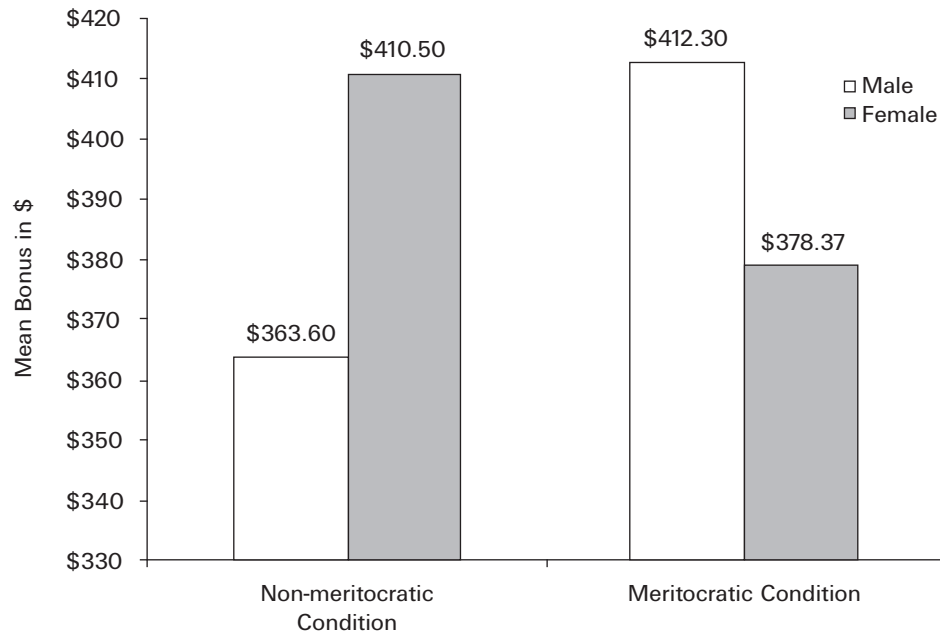
**Participants.** In study 2, the participants were again recruited at a business school in the northeastern United States. The study included 115 participants (70 male and 45 female). Age and managerial experience were similar to those in the previous study. Participants were on average 29.29 years old (with a standard deviation of 4.20 years) and had an average of 6.07 years of work experience (with a standard deviation of 3.76 years). Approximately 8 percent of the respondents had already earned an MBA. As in study 1, most respondents (almost 75 percent) reported liking jobs with supervisory responsibilities, with 4.3 percent reporting not liking them.

**Procedure.** With the exception of substituting the low-performing female filler profile for the low-performing male filler profile, the procedure was identical to that used in the prior study.

## Results

**Manipulation check.** Similar to study 1, our manipulation led participants to perceive ServiceOne as more meritocratic and fair in the meritocratic condition than in the non-meritocratic condition (both significant at the .01 level). Participants rated ServiceOne as more meritocratic (the mean difference between the two conditions is .738,  $t$ -value = 2.641,  $p < .01$ ) and more fair (the mean difference was .708,  $t$ -value = 2.980,  $p < .01$ ) under the meritocratic condition than under the non-meritocratic one.

**Figure 3. The paradox of meritocracy in the distribution of rewards by employee gender, study 2 (N = 115).**



2 x 2 factorial design: ANOVA F-test (Gender x Meritocracy interaction) = 10.125 ( $p = .001$ ).

**The paradox of meritocracy effect.** The results for the bonus measure are summarized in figure 3. Consistent with study 1, in the non-meritocratic condition we found that women earn on average a bonus \$47 higher than equally performing men ( $p < .01$ ). By contrast, in the meritocratic condition, men earn, on average, a bonus \$34 higher than equally performing women ( $p < .01$ ). Also consistent with the analyses of study 1, this yielded an interaction effect for gender and meritocracy such that women were paid less than men in the meritocratic condition but not in the non-meritocratic condition ( $F = 10.125$ ,  $p = .001$ ). The findings thus strongly support our main hypothesis, demonstrating that the effect does not depend on the gender of the filler profile.<sup>4</sup>

As in study 1, the analyses of the ratings variables in study 2 on hiring, promotion, termination, and success in the future also supported our ancillary prediction of less ascriptive bias in the translation of performance evaluations into these other employee career outcomes. The standardized coefficients were similar to those reported in table 1: consistent with our prediction, participants also tended to rate women more favorably than men in the non-meritocratic condition and to rate men more favorably than women in the meritocratic condition on hiring, promotion, termination, and success decisions, although the effect sizes were lower than for bonuses. For hiring, promotion, and termination, the interaction effects of gender and meritocracy were non-significant (for hiring,  $F = .762$ ,  $p = .385$ ; promotion,  $F = .237$ ,  $p = .628$ ; and termination,  $F = 1.668$ ,  $p = .199$ ). The only significant interaction effect found was for employee success rating ( $F = 4.389$ ,  $p = .038$ ).

**Comparing high- and low-performing employee profiles.** Our hypothesis, and by extension our study design, focused

<sup>4</sup> Once again, we found no significant difference in the bonus amount assigned to the female filler profile between the two conditions (the mean bonus difference was \$21.57,  $t$ -value =  $-0.775$ ,  $p = .44$ ). The average bonus for the filler profile was \$150.42 in the meritocratic condition and \$128.85 in the non-meritocratic condition.



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on comparing equally performing male and female employees, but another possible way of ascertaining the effect of a culture of meritocracy on merit-compensation decisions is to compare the same-gender high and low performers in the meritocratic and non-meritocratic conditions. For simplicity, “low performer” refers to the filler profile of the employee who received a 3 rating versus “high performer,” which refers to the test profiles of employees who received a 4 rating. This approach allowed us to assess to what extent performance differentials are less effective at generating rewards for women than men in the meritocratic condition, compared with the non-meritocratic condition. In other words, we could also examine whether greater performance translates into greater rewards in the meritocratic condition, regardless of the gender of the employees.

To explore this possibility, we ran some additional analyses. For study 1 (low-performing male filler profile), we ran an ANOVA analysis with only the two male profiles, estimating (a) the main effect of meritocracy, (b) the main effect of being the test or filler profile (“performance”), and (c) the interaction of these two. The latter interaction effect tells us whether the performance effect is significantly greater in the meritocratic condition than in the non-meritocratic condition for male profiles. This interaction effect was positive and significant ( $F = 4.015$ ,  $p = .046$ , two-sided). Both the “performance” direct effect and the effect of meritocracy were significant for men ( $p < .001$ ). We took a similar approach for study 2 (low-performing female), with only the two female profiles. The interaction effect was not significant for female profiles ( $F = 1.422$ ,  $p = .236$ ). Although the “performance” direct effect was significant ( $p < .001$ ), the effect of meritocracy was not significant for female profiles ( $F = .041$ ,  $p = .84$ ).

Overall, these findings are consistent with our paradox of meritocracy hypothesis and indicate that the effect of meritocracy on monetary rewards is significant for men but not women. In addition, the effect of performance on rewards is significantly greater in the meritocratic condition than in the non-meritocratic condition for men, but there is no evidence of a similar boost for women in the meritocratic condition.<sup>5</sup>

### STUDY 3: THE FEMALE ADVANTAGE IN THE NON-MERITOCRATIC CONDITION

The results of studies 1 and 2 supported our prediction that women would receive smaller average bonuses than men in the meritocratic condition. One unpredicted finding in both studies, however, was that women received greater average bonuses in the non-meritocratic condition. Although this finding does not contradict our hypothesis, it is surprising and warrants additional attention in a third study.

One possible explanation is that the language about discretion used in the non-meritocratic condition may have signaled the possibility of bias on the part of the evaluating supervisors. If the participants believed that managerial bias in the evaluation system disadvantaged women, they may have felt they needed to compensate or correct for this bias by favoring women (consistent with Petty and Wegener, 1993;

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Although a direct comparison cannot be made between studies 1 and 2 because participants were not randomly assigned across studies, we can still approximate this comparison by merging both datasets in studies 1 and 2 and running an ANOVA comparing the same-gender high and low performers in the meritocratic and non-meritocratic conditions. We examined (a) the main effect of meritocracy; (b) the main effect of being the test or filler profile (“performance”); (c) the main effect of whether the compared profiles are male (study 1 data) or female (study 2 data); (d) all two-way interactions; and in particular, (e) the three-way interaction of (a), (b), and (c). The estimated three-way interaction coefficient (d) indicates that the “performance” effect is significantly greater in the meritocratic condition for men than for women ( $F = 4.818$ ,  $p = .029$ ). Though the “performance” direct effect (term b) was significant at the .001 level, the effect of meritocracy and the two-way interactions were not significant. Participants in the meritocratic condition thus showed greater levels of bias in favor of men in translating employee performance differentials into bonuses (in comparison with participants in the non-meritocratic condition). We thank an anonymous ASQ reviewer for suggesting this analysis.

Wegener and Petty, 1995).<sup>6</sup> In particular, the participants in studies 1 and 2 may have been responding to the language emphasizing managerial discretion in the “Core Values” statement of the non-meritocratic condition (e.g., “raises and bonuses are to be given based on the discretion of the manager”). If participants perceived more managerial discretion in the non-meritocratic condition, they may have suspected that the performance evaluations they received were biased in favor of male employees and compensated for this bias by awarding a larger bonus to the female test profile. If this explanation is correct, then removing the emphasis on managerial discretion in the non-meritocratic condition should result in equal bonuses for the male and female test profiles.

## Method

**Updated non-meritocratic condition.** To test the effect of an emphasis on discretion, we first constructed a new non-meritocratic condition designed to be less discretionary than the non-meritocratic control condition used in studies 1 and 2. In the new condition, the statements on the “Core Company Values” form read as follows: (1) “All employees are to be evaluated regularly”; (2) “performance evaluation forms include a quantitative as well as qualitative component about the employee’s performance”; (3) “performance evaluations are part of the employee’s official personnel file”; (4) “performance evaluations are discussed with each employee every year”; and (5) “ServiceOne’s goal is to evaluate all employees every year.” We refer to this as the “updated non-meritocratic condition.”

We next conducted a pretest of all three “core values” statements to evaluate two key assumptions: first, that the original non-meritocratic condition was perceived as more discretionary than the meritocratic condition; and second, that the updated non-meritocratic condition and the meritocratic condition would be perceived as equally discretionary. We asked 21 participants (undergraduate students at a public university in the Midwest) to read and rate the three “Core Company Values” statements. They were asked to assess the level of discretion that managers working for an organization with each set of values would possess. The values statements were rated on a scale of 1 (“Very little discretion”) to 7 (“A great deal of discretion”). As expected, participants rated managers in the original non-meritocratic condition as having significantly greater discretion than managers in the meritocratic condition (mean = 6.24 vs. mean = 3.67,  $p < .01$ , paired t-test, two-tailed). Our updated non-meritocratic condition successfully reduced the perceived level of managerial discretion, being rated as significantly less discretionary than the original non-meritocratic condition (updated non-meritocratic condition mean = 3.95,  $p < .01$ , paired t-test, two-tailed). Importantly, the updated non-meritocratic condition and the meritocratic condition were rated as equally discretionary ( $p = .52$ , paired t-test, two-tailed). The results of the pretest thus confirmed both our assumptions.

**Participants.** Study 3 included 101 participants (62 men and 39 women), again recruited at a business school in the northeastern United States. Similar to the previous studies,

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Another possibility is suggested by work on “aversive racism” (Gaertner and Dovidio, 1977; Gaertner et al., 2005), which has found that individuals favor stigmatized groups when concerned about appearing prejudiced. Because gender discrimination is frowned upon in organizations, especially among managers (see, e.g., Dobbin, 2009), participants in the non-meritocratic condition may have awarded the female employee a larger bonus to avoid the perception that they were biased. Given the language of discretion used in the non-meritocratic condition, however, we decided to first test the overcorrection explanation described above in study 3.

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participants were 30 years old on average (with a standard deviation of 3.5 years); they had an average of 5.73 years of work experience (with a standard deviation of 3.56 years); and most of them (71.6 percent) reported liking jobs with supervisory responsibilities (with 3.9 percent not liking them, and 24.5 percent not knowing yet whether they would like jobs with supervisory duties).

**Procedure.** The procedure in study 3 was identical to that used for study 1, with the exception that the updated non-meritocratic condition was used in place of the original non-meritocratic condition with the five non-discretionary core values statements, as described above.

## Results

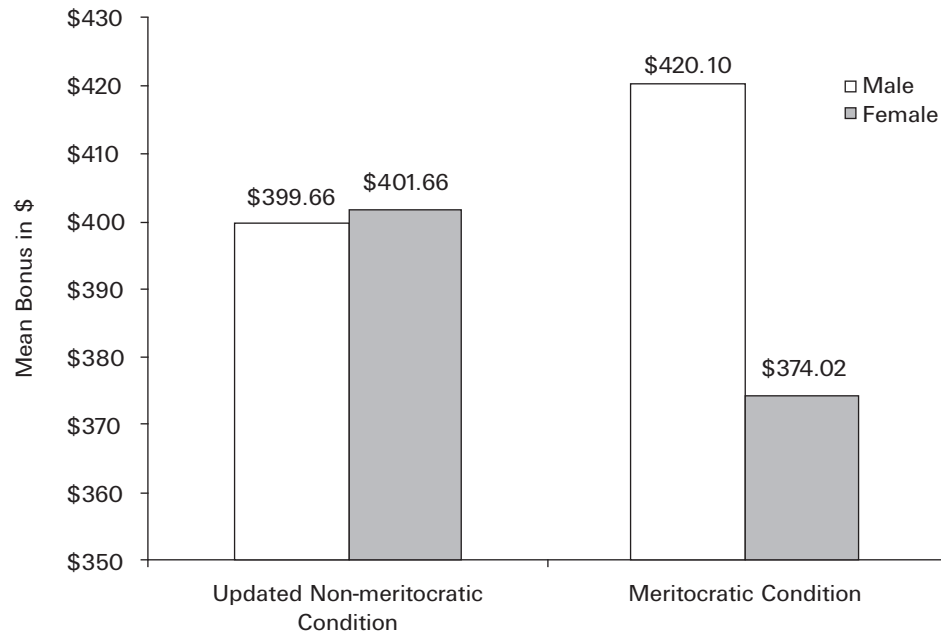
**Manipulation check.** Our meritocracy manipulation was successful. As in the previous two studies, we found that participants rated ServiceOne as more meritocratic (the mean difference between the two conditions was .674,  $t$ -value = 2.376,  $p < .01$ ) and more fair (the mean difference was .635,  $t$ -value = 2.552,  $p < .01$ ) under the meritocratic condition than under the non-meritocratic one.

As an additional check on our pretest results, in study 3, we also asked participants to assess the level of discretion that managers working for an organization with each set of values would possess. The values statements were rated on a scale of 1 ("Very little discretion") to 7 ("A great deal of discretion"). In study 3 (and similar to our pretest findings), participants rated the updated non-meritocratic condition and the meritocratic condition as equally discretionary; hence, we had successfully removed any difference in perceptions of discretion across the two conditions (the difference of .275 points was not significant,  $p = .39$ , two-tailed).

**The paradox of meritocracy effect.** Figure 4 reports the results for the bonus measure in the meritocratic and non-meritocratic conditions. As in studies 1 and 2, we found support for our hypothesis that women would be disadvantaged in the meritocratic condition. On average, men in the meritocratic condition earned a bonus \$46 dollars higher than equally performing women ( $t$ -value =  $-2.153$ ,  $p = .018$ ).

Most importantly for the purposes of study 3, we found no significant differences in the bonuses assigned to men and women in the updated non-meritocratic condition: the bias in favor of women found in the original non-meritocratic condition in studies 1 and 2 disappears under the updated non-meritocratic condition in study 3. In the updated non-meritocratic condition, women were paid \$2 more than men on average, a non-significant difference ( $t$ -value =  $-.075$ ,  $p = .94$ , one-tailed). The interaction effect of gender and meritocracy only approached significance, which is not surprising given the lack of significance for the gender difference in the non-meritocratic condition ( $F = 1.997$ ,  $p = .161$ ). Thus the results of study 3 replicate the finding of a penalty for women in the meritocracy condition and also demonstrate that the advantage for women in the non-meritocratic condition disappears when we remove the discretionary wording in this condition.

Figure 4. The paradox of meritocracy with updated non-meritocratic condition, study 3 (N = 101).



2 × 2 factorial design: ANOVA F-test (Gender × Meritocracy interaction) = 1.997 ( $p = .161$ ).  
Updated non-meritocratic condition: \$2.00 Bonus difference (not sig.) (t-test =  $-.075$ ,  $p = .94$ , one-tailed).  
Meritocratic condition: \$46.07 Bonus difference (t-test =  $-2.153$ ,  $p = .018$ , one-tailed).

As in the previous studies, the analyses of the ratings on hiring, promotion, termination, and success in the future also supported our ancillary prediction of less gender bias in the translation of performance evaluations into these other key employee outcomes (for simplification purposes, the results are not presented here but are available upon request).

## GENERAL DISCUSSION

Inside organizations, the use of meritocratic organizational policies and procedures, particularly pay-for-performance or merit-based reward practices, has gained great support among employers over past decades (e.g., Heneman and Werner, 2005; Noe et al., 2008). Although these efforts by employers are aimed at improving equal opportunity and linking merit to employees' careers, recent empirical studies have found that workplace disparities persist even with the adoption of certain employer practices such as affirmative action and diversity policies (e.g., Kalev, Dobbin, and Kelly, 2006) or merit-based pay programs (e.g., Castilla, 2008; Manning and Swaffield, 2008). What remains an open question, however, is whether gender and racial disparities in the distribution of rewards remain in today's organizations in spite of management's efforts to introduce merit-based reward systems or because of such efforts. This article advanced research on this question by empirically testing, for the first time in the literature, whether certain management efforts to promote meritocracy in the workplace may have the causal effect of increasing ascriptive bias in the translation of employee performance into rewards and other career outcomes.

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Using three experimental studies with a total of 445 individuals with managerial experience, we found strong support for the novel theoretical argument that we call the paradox of meritocracy effect in managerial decisions. Participants in the meritocratic condition showed greater preference for the male employee over an equally qualified female employee (in the same job, with the same supervisor, and the same performance evaluations) when making bonus decisions. By contrast, participants in the non-meritocratic condition did not favor the male employee. This effect was significant and did not depend on the gender of the participant or the gender of the filler profile. The effects of emphasizing meritocracy on other (more visible) employee career decisions such as hiring, promotion, and termination were also in the predicted direction, but as expected, the effect sizes were smaller. This provides support to our ancillary prediction that less gender bias would be found in the translation of performance scores into more visible employment outcomes when comparing managers embedded in meritocratic versus non-meritocratic organizational contexts, consistent with studies of real organizations (e.g., Petersen and Saporta, 2004; Kalev, Dobbin, and Kelly, 2006; Castilla, 2008).

In addition, study 3 showed that removing the language emphasizing managerial discretion from the non-meritocratic condition eliminated the bias in favor of women found in that condition in studies 1 and 2. The finding that the language about discretion in the non-meritocratic condition may have triggered the need to compensate for possible bias against women stresses the key role organizational cultures play in shaping ascriptive inequality at work. Although previous empirical research has shown that personnel practices that allow managerial discretion have the potential to increase bias toward women and minority groups (e.g., Reskin and McBrier, 2000; Elvira and Graham, 2002), study 3 indirectly suggested that organizational values that emphasize managerial discretion alone may create the perception of the existence of bias and may therefore motivate individual attempts to correct it.<sup>7</sup>

## Underlying Mechanisms and Scope Conditions of the Paradox of Meritocracy

Though an empirical examination of the possible underlying mechanisms is beyond the goal of our study, there are at least two mechanisms by which the paradox of meritocracy may work. One mechanism is the role of moral credentials: individuals are more prone to express prejudiced attitudes when they feel that they have established their moral credentials as a non-prejudiced person (Monin and Miller, 2001). The moral credentials argument is consistent with our prediction that managers making decisions about employees on behalf of an organization will be more likely to discriminate against women when that organization explicitly promotes itself as meritocratic. When the culture of an organization includes the strong belief that the organization is meritocratic, and particularly when managers themselves explicitly endorse this belief, this serves as a form of meritocratic moral credentialing that makes future bias more likely. An organizational culture that prides itself on meritocracy may encourage bias by convincing

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We stress "indirectly" here because study 3 did not directly compare discretionary and non-discretionary conditions. We thank an anonymous ASQ reviewer for making this point.

managers that they themselves are unbiased, which in turn may discourage them from closely examining their own behaviors for signs of prejudice. In addition, if a culture that emphasizes meritocracy leads managers to feel that members of the organization consider one another to be unbiased and fair, they may feel that their motivations are not in question and that there is little risk that their actions will be interpreted as prejudiced. As a result, they may feel less constrained by social norms and be more likely to allow stereotypes to influence their decisions.

Uhlmann and Cohen's (2007) argument that a sense of personal objectivity moderates the extent to which individuals act on their beliefs, including stereotypical beliefs, would also predict the paradox of meritocracy in employment settings. They showed that when people feel objective, they become more confident that their beliefs are valid, and thus more likely to act on them. As a result, people who hold work-relevant negative stereotypes about women become more likely to express those stereotypes in their employment decisions. In our study, the meritocratic condition gave participants the opportunity to agree that fairness and equity are important criteria for the extra compensation of employees. Emphasizing these criteria as organizational values may make participants feel that they are fair and objective and, as a result, make them more likely to act on beliefs that they hold. If participants do hold gender stereotypes—and past work suggests that such stereotypes are common and automatic (Greenwald and Banaji, 1995)—then increasing participants' tendency to act on their beliefs could produce the patterns we found in the meritocracy condition.

Although a full review of the stereotyping literature is beyond the scope of our current study, we believe that both mechanisms are also consistent with previous research in social psychology. Much of the work broadly classified under the "justification-suppression model" of prejudice (Crandall and Eshleman, 2003) converges on the idea that individual prejudice will be suppressed unless it can be justified on grounds other than prejudice. To the extent that moral credentials and self-perceived objectivity provide two justifications, they both may facilitate the expression of prejudice in meritocratic settings. Along similar lines, a number of studies have proven that people are more likely to use stereotypes when they lack motivation to avoid applying stereotypes (e.g., Plant and Devine, 1998; Tetlock, 1983a, 1983b; Kunda and Spencer, 2003) or when they expend less effort to monitor their own decisions for the influence of stereotyping (e.g., Moskowitz et al., 1999; Fein et al., 2003). In our particular case, managers embedded in meritocratic contexts may experience higher confidence that their decisions are impartial, leading them to be less motivated or invest less effort in avoiding the application of stereotypes.

Before assessing the broader implications of our study below, it is important to qualify the generality of our argument and consider the scope conditions that may delimit the paradox of meritocracy effect in organizations. Doing so may contribute to our understanding of how employers can mitigate the paradox of meritocracy effect by taking steps to reduce the extent to



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which these conditions exist. One scope condition is the level of preexisting biases held by individuals in organizations. We would not expect to find the paradox of meritocracy effect in organizational settings in which evaluators harbor no gender bias. A key insight in the study of stereotyping, however, is that individuals are subject to both conscious and unconscious biases. Widespread cultural beliefs about the association between demographic characteristics and particular traits (e.g., women and productivity) often shape evaluations and behavior unconsciously, even among those who disagree with the stereotype on a conscious level (e.g., Devine, 1989; see Greenwald and Krieger, 2006, for a review).

A second scope condition has to do with how meritocratic organizational procedures and values are framed and articulated to the organizational members. In our study, participants were simply asked to indicate whether they agreed with the organizational core values presented, as a way of endorsing certain meritocratic values, before evaluating the employees. This subtle manipulation increased the relative advantage of equally performing men in the meritocratic condition. In settings in which the articulation of core values is aligned with other organizational cultural elements and practices that limit the extent to which managers feel (and act on their feelings) that they are non-biased, fair, or objective (Monin and Miller, 2001; Uhlmann and Cohen, 2005), the paradox of meritocracy effect may presumably be weakened. For example, Uhlmann and Cohen (2007) suggested that the self-objectivity effect on hiring bias will be weaker when there is high accountability.

A third possible scope condition is how the presence of additional organizational procedures and routines is likely to moderate the paradox of meritocracy effect. Because our focus was on the effects on employee rewards of promoting a meritocratic culture, we did not build into our study design other organizational factors shown to affect bias in the literature. For example, organizational policies aimed at increasing transparency and accountability in the workplace have been shown to reduce the expression of individual bias both experimentally (e.g., Lerner and Tetlock, 1999) and in field studies (e.g., Castilla, 2008). Additionally, employers' policies designed to limit discretion for managers to exert strong influence in determining bonuses may also decrease workplace inequality (e.g., Reskin and McBrier, 2000; Elvira and Graham, 2002). Consequently, the negative effects of emphasizing meritocratic values in the workplace may be less likely to occur when organizational conditions promote less managerial discretion, more accountability, and more transparency in the workplace.

## Theoretical Implications

Beyond the implications for research about the role organizations play in creating and maintaining inequality in the workplace (e.g., in the tradition of Baron and Bielby, 1980; Baron, 1984; Ferguson, 1984; Bielby and Baron, 1986; Beckman and Phillips, 2005; Phillips, 2005), our research makes a number of important theoretical contributions to our understanding of broader organizational processes in management and sociology. First, our finding about the unintended effects of certain organizational efforts to promote meritocracy in the workplace

provides a novel theoretical explanation for why ascriptive inequality remains despite the proliferation of merit-based policies inside organizations. Previous studies have shown that organizational policies aimed at reducing disparities for women and ethnic minorities do not necessarily work (e.g., Edelman, 1990; Baron, Mittman, and Newman, 1991; Dobbin et al., 1993; Edelman and Petterson, 1999). In contrast to recent field studies demonstrating that workplace inequality persists in spite of meritocratic employer practices (e.g., Kalev, Dobbin, and Kelly, 2006; Castilla, 2008), our study empirically shows that ascriptive inequality, particularly in the distribution of rewards, is potentially introduced because of such meritocratic efforts. Additionally, our study demonstrates that ascriptive bias occurs even after holding the employees' performance evaluations constant and equivalent. In real settings, the performance evaluations themselves may also be affected by gender bias (Eagly and Karau, 2002; Biernat, 2003; Correll and Ridgeway, 2003). Thus our study suggests a new source of bias, although not the only one.

A second contribution is to the body of research that links cultural context to individual cognition and behavior. Our study specifically demonstrates that an emphasis on meritocracy as an organizational cultural value can serve as an "environmental trigger" (DiMaggio, 1997: 279) that unleashes ascriptive biases. Thus our finding is consistent with past work showing that local cultures can trigger individual cognitive and interactional biases against low-status groups and that the processes of evaluation themselves are influenced by the cultural context in which individuals interact (Ridgeway, 1997; Correll and Ridgeway, 2003; Lamont, 2009; Turco, 2010). Along similar lines, our study joins broader research efforts investigating the impact of organizational cultures on labor market processes and workplace inequality, in the tradition of Barley (1991) and Martin (1992). Ely and Thomas (2001), for example, examined how different diversity cultures affect not only work group processes and outcomes but also employees' experiences inside three different firms. Consistent with these studies, we found that the cultural context of meritocracy has the potential to increase bias in employment decisions. In contrast, our research stresses the potential unintended (opposite) effects of certain managerial efforts aimed at promoting meritocratic cultural values in the workplace.

Third, our study contributes to important psychological work on evaluation biases. Past work in moral credentialing (Monin and Miller, 2001; Effron, Cameron, and Monin, 2009; Kaiser et al., 2009), for example, tends to focus on the consequences of an individual's decision or cognition (i.e., presenting or thinking of oneself as unbiased) for subsequent bias in his or her own decisions. The same applies to research on self-perceived objectivity (Uhlmann and Cohen, 2005, 2007). Our research extends these perspectives by demonstrating that bias can be shaped not only by an individual's previous decisions or beliefs but also by organizational cultures that emphasize meritocracy. Furthermore, the subtle nature of our manipulation highlights how little is sometimes needed to trigger individuals' biases in managerial decisions.

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### Further Research

Our research could be productively extended in several ways. First, we focused on employee gender in this study because we employed several manipulations, and our MBA participants were in limited supply. For the same reason, all employees had the same title, worked in the same unit, and had the same supervisor. Future experiments should test whether the results generalize to other employee demographics such as race, ethnicity, and country of origin, as well as other supervisor and job characteristics. We also asked participants to reward three employees, with the low-performing employee as a filler profile. Future research could further examine our paradox of meritocracy finding by changing the characteristics of the pool of employees being evaluated, including the number of employees and the levels of employee performance. We also think that there is great promise in undertaking additional studies examining the translation of more objective productivity measures, such as sales or revenues, into rewards. These studies could help us further explore the paradox of meritocracy.

The second extension involves additional testing of the relationship between different aspects of meritocracy and compensation. In our study, we manipulated the presentation of a meritocratic culture, as we believe this is one of the most basic aspects of meritocracy at the organizational level. This provided a conservative test of whether emphasizing meritocracy as a core organizational value can produce bias in employee evaluations. Of course, work cultures are complex and contextual (Barley, 1983, 1991), and additional experimental research should manipulate other elements of organizational culture when continuing the investigation of the paradox of meritocracy effect. We also encourage further theorizing and testing to extend our finding to other key aspects of meritocracy, including specific merit-based employment processes and routines as they are currently implemented in the workplace (see Cappelli, 1999; Dobbin, 2009). Here we suggest paying particular attention to the effect of bundles of organizational practices and cultural elements on ascriptive inequality (à la Kalev, Dobbin, and Kelly, 2006, in the case of practices; Ely and Thomas, 2001, in the case of organizational cultures). Similarly, further research should examine whether the paradox of meritocracy applies to other types of evaluation procedures (such as ranking, forced distribution, the management by objectives approach, and 360-degree performance systems), merit-based reward systems (such as sales commissions, special recognitions, profit-sharing plans, employee stock options, and deferred compensation), and to other sets of company goals and guidelines behind the performance-reward process (see Lawler and McDermott, 2003; Hale, 2004; Heneman and Werner, 2005; Rynes, Gerhart, and Parks, 2005).

Along these lines, a productive research direction consists of examining whether the paradox of meritocracy effect interacts with organizational policies aimed at increasing transparency or accountability in the workplace, which have been shown to reduce the expression of bias both experimentally (e.g., Lerner and Tetlock, 1999) and in field studies (e.g., Castilla, 2008). Research should also continue exploring

what real companies may be doing to achieve meritocracy and diversity in the workplace beyond hiring and promotion (e.g., Kalev, Dobbin, and Kelly, 2006; Dobbin, Schrage, and Kalev, 2008; Kalev, 2009). Such research can help us understand under which conditions meritocratic processes foster fairness and equity in organizations.

Finally, to continue building on our efforts to study the nexus of organizational cultures and cognition, we hope future work will investigate the extent to which cultures of meritocracy may directly shape other important organizational behaviors outside the domain of employee rewards and other career outcomes. One interesting research possibility is to study whether endorsing a meritocratic culture can be viewed as a more broadly "moral" behavior, ultimately influencing the ethics of managerial decisions. We also see promise in examining the extent to which the underlying mechanisms we propose in this study account for our paradox of meritocracy, with emphases on the moral credentialing and the self-perceived objectivity explanations. Altogether, we believe that these potential studies offer interesting future strategies for expanding our research, both theoretically and empirically, while providing greater interdisciplinary engagement in this area.

### **The Risks of Rewarding Merit**

Inside organizations, employers have often emphasized various elements of meritocracy and merit-based approaches in the workplace. Perhaps implicit in the adoption of these merit-based practices is the presumption that they increase workplace opportunities as well as fairness and equity. Because these practices are ultimately implemented by decision makers embedded in different organizational cultures and structures, however, there are hidden risks behind the adoption of ostensibly meritocratic practices. Our work reveals that bias can be triggered by attempts to reduce it, particularly in organizational contexts that emphasize meritocratic values. This paradox of meritocracy is of theoretical relevance because it provides an insight into why gender and racial disparities persist within job titles and work establishments, especially given the recent shift to employer procedures emphasizing merit and pay for performance.

Finally, our study has important implications for managerial practice and policy making. It serves as a cautionary lesson about the potential unintended negative consequences of organizational efforts to reward merit. If not implemented carefully, such efforts may prove unhelpful or even harmful. We do not mean to suggest that the pursuit of meritocracy is futile, only that it may be more difficult than it first appears. The central contribution of this study is to demonstrate that the causal effect of introducing meritocratic cultures and merit-based practices cannot be taken for granted. Instead, and paradoxically, the implementation of such organizational routines and efforts may have hidden risks and should therefore be undertaken with care.

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